

## Green Homes for the Modern Family

### Why Green?

You have the power to create a healthy home for your family, lower your monthly bills, and reduce your impact on the environment by adopting green building principles into your home. When building a new home, purchasing a new home, or even remodeling your existing home, consider the use of low-cost, “off the shelf” products and methods that can positively impact you and your family.

Green building, also called sustainable building, is a whole-building approach to design and construction that incorporates methods and products for the efficient use of resources in five categories: site, water, energy, materials, and indoor environmental quality.

The following list presents some of the easiest and least-costly approaches, which may also offer direct monetary savings. This list does not include all green building features, but is intended to offer a starting point. Depending on the specifics of your home or site, some of these approaches may not be applicable.

### Site

- **Orientation:** Homes oriented with the long axis running east-west experience less solar heat gain in summer and take advantage of passive solar heating in winter.
- **Footprint:** Reducing the footprint of your home saves money and reduces the amount of resources needed to build your house.
- **Location:** Choosing an established area within walking distance to services and work—or a public transit line—reduces car trips that can save money on fuel, reduce wear and tear on your car, and reduce air pollution.
- **Paving:** Limiting stormwater runoff by reducing the amount of impermeable surfaces, such as patios and walkways, in your landscape helps to reduce surface water

pollution, relieves overtaxed stormwater systems, and helps to recharge groundwater aquifers.

### Water

Reducing water use saves a valuable resource, and it can save money on monthly utility bills. Reducing water use saves electricity associated with the need to pump water to users.

- **Fixtures:** Install low-flow fixtures, like faucets or dual-flush toilets, that exceed code requirements.
- **Landscape:** Site-specific and climate-appropriate landscape can reduce water consumption and biomass (green waste). The use of drip irrigation, where applicable, can save water and help to prevent runoff.

### Energy

Implementing energy-saving strategies can provide the greatest cost savings in your monthly utility bills. Reducing electricity use can also reduce air pollution associated with its generation. Many utilities and State, federal, and local agencies offer technical assistance, economic incentives, or rebates for energy-efficient homes.

- **Solar Homes:** On-site generation of electricity with photovoltaic panels offers long-term savings and reduces pollution associated with electricity generation.
- **Windows:** Energy-efficient windows are generally double-paned and use “low-e” glazing, which reduces heat gain from the outside and heat loss from the inside.
- **Insulation:** Install insulation that is formaldehyde-free, includes recycled content, and exceeds the “R” value of the energy code. Selecting insulation with these properties reduces energy use, saves money on monthly utility bills, keeps materials out of landfills, and

reduces your family's exposure to harmful chemicals.

- **Heating, Ventilation, Air Conditioning (HVAC):** Air conditioners that have a Seasonal Energy Efficiency Rating (SEER) 12 or higher and that are sized appropriately for your space will save both energy and money. They will generally pay for themselves within a reasonable amount of time through monthly utility bill savings.
- **Roofing:** Light-colored roofing material and radiant barriers help reflect the sun's heat, which reduces heat build-up through the roof and reduces cooling requirements.
- **Appliances:** Choose energy- and water-efficient appliances that are certified under the Energy Star program.

## Materials

Select products that reduce the demand for virgin raw materials and that have a reduced impact on the environment. Keeping waste from landfills benefits all Californians, and buying recycled-content materials helps to "close the loop."

- **Construction Waste Management:** Recycle at least 50 percent of the waste from your project. Typically wood, cardboard, and concrete are the easiest to recycle.
- **Recycled-Content Materials:** Recycled-content materials—for example, some carpet, paint, and tile—keep materials out of landfills.
- **Durable materials:** Durable materials require less replacement and can save money in the long run.
- **Lumber:** Engineered trusses or finger-jointed lumber and molding reduce the need for new clear lumber. Certified wood comes from forests that are managed in an environmentally preferable manner.
- **Rapidly Renewable Materials:** Consider cork and bamboo as an alternative to hardwood flooring. These materials regenerate faster than their hardwood counterparts.

## Indoor Environment

To protect your family's health, avoid materials that give off undesirable or toxic chemicals, and control moisture to prevent mold growth. Avoid products that emit volatile organic compounds (VOC) and have added formaldehyde, both of which have serious potential health impacts. Provide mechanical ventilation to assure a good supply of fresh air.

- **Emissions Testing:** To reduce exposure to harmful chemicals, look for materials that have passed third-party emissions testing; for example, the California Department of Health Service's "Practice for Testing of VOCs from Building Materials Using Small Chambers."
- **Fiberboard:** Some fiberboard and plywood products are made with no added formaldehyde.
- **Paints and Adhesives:** A number of paints and adhesives are offered that contain low or no VOCs.
- **Carpet:** Selecting carpet that has passed the Carpet and Rug Institute's (CRI) Green Label Plus testing will reduce unhealthy chemicals in your home.

## Hire Experience

Look for builders and designers with experience in green projects or projects certified using residential green building guidelines.

## More Information

To further explore the possibilities and benefits of sustainable building, please visit the California Integrated Waste Management Board's Green Building website at [www.ciwmb.ca.gov/GreenBuilding/](http://www.ciwmb.ca.gov/GreenBuilding/) or contact the sustainable building program at (916) 341-6500.

**Join Governor Schwarzenegger to Keep California Rolling.** Every Californian can help to reduce energy and fuel consumption. For a list of simple ways you can reduce demand and cut your energy and fuel costs, Flex Your Power and visit [www.fypower.com](http://www.fypower.com).